A tonal analysis of Gurung, with separate systems for register and contour pitch features

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I. Introductory: Gurung dialects

The Gurung language made its Bulletin début in 1955 with an article by Burton-Page: ‘Two studies in Gurungkura: I. tone; II. rhotacization and retroflexion’ (BSOAS, 17/1, 1955, 111ff.). Since tone is the subject of one of these studies, it might seem that there would be little point in adding a further study of that same topic, important though it is; but a different dialect can lead to a considerable difference in the appearance of Gurung phonology as a whole, and so, too, can a difference in technique of analysis. As Burton-Page himself writes: ‘it should be mentioned that the material presented here is relevant only to the Ghandrung dialect, which of the four or five major Gurungkura dialects is accorded the greatest prestige-value by the Gurungs themselves’; his informant was G./Lieut. Ganesh Gurung, M.C., 1/2nd K. E. O. Goorkha Rifles (Burton-Page, 1955: 111).

My own Gurung material I collected in Pokhara, central Nepal, during the monsoon months of 1965. My informant, Manshiri Gurungni, was a member of the domestic staff of the Shining Hospital in Pokhara; but her birthplace was the village of Thak (or Thonsu), about a full day’s fast walk north east of Pokhara, from which Siklis, one of the largest Gurung villages, is a further full day’s walk to the north (cf. Gurung, 1980: 150–89, and especially the two maps ‘8. Pokhara’ and ‘9. Lamjung’). Manshiri Gurungni had moved to Mohariya, to the south of Ghandrung (or Ghandruk), two or three days’ walk west of Pokhara, on marriage, before settling in Pokhara; she was aware of dialect differences between her birthplace and Ghandrung, to the west, and Lamjung, to the east.

II. Burton-Page’s analysis: a single two-term system

The most notable feature of Burton-Page’s account of tone in the Ghandrung dialect of Gurung is that, unlike my analysis of Mansiri Gurungni’s Gurung, he finds a single two-term system to be appropriate; the distinctions in pitch pattern that he has stated as phonetic exponents of each of the terms of this system, tone 1 and tone 2, are five in number according as the word that they characterize is (i) a monosyllable uttered in isolation, (ii) a monosyllable

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1 The enlarged version of a paper with the same title contributed to the 17th International Conference of the Linguistic Society of Nepal, Kathmandu, 1993.
2 It is estimated that 37,877 Magars were enlisted in the Indian Army during the World War II along with 18,725 Gurungs (Gurung, 1980: 193–4); indeed it was the Magars and Gurungs that Professor R.L. Turner, M.C., sometime Adjutant of the 2nd Battalion 3rd Q.A.O. Gurkha Rifles (and, as Sir Ralph Turner, Director of the School of Oriental and African Studies, 1937–57), no doubt had in mind when he ended the preface to his Nepali–English dictionary with the words ‘bravest of the brave, most generous of the generous, never had country more faithful friends than you’ (Turner, 1931/1980: ix); for the 3rd Gurkha Rifles was recruited solely from Magars and Gurungs. Three Gurungs won the Victoria Cross in Burma in 1943 and 1945 (Tuker, 1957: 299–300).

The number of Gurung-speakers in Nepal according to the 1981 census is given as 174,464, which is 1.1% of a total population of 15,022,839 (Subba, 1983: 2); for 1961 the number of Gurung-speakers in Darjeeling District of West Bengal, India, was 15,500 (2.5%) (Hutt, 1988: 26).
uttered with list intonation, comprising alternative patterns according as the tempo of the sentence is slow ("sS") or fast ("fS"), (iii) a monosyllable occurring finally in a list, again with slow-tempo and fast-tempo alternatives, (iv) a disyllable uttered in isolation, or (v) a disyllable with list intonation (pp. 113–16; see fig. 1).

<table>
<thead>
<tr>
<th>tone 1</th>
<th>seven</th>
<th>seven</th>
<th>ten</th>
<th>seventy, comes</th>
<th>seventy</th>
</tr>
</thead>
<tbody>
<tr>
<td>ni</td>
<td>ni</td>
<td>cu</td>
<td>nicu, khamu</td>
<td>nicu</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>tone 2</th>
<th>[\wedge]</th>
<th>[\vee, \wedge]</th>
<th>[\wedge], [\wedge]</th>
<th>[\wedge]</th>
</tr>
</thead>
<tbody>
<tr>
<td>[\wedge]</td>
<td>[\wedge]</td>
<td>[\wedge]</td>
<td>[\wedge]</td>
<td></td>
</tr>
</tbody>
</table>

Two list-final words 'pra 'hundred', however, is shown as having a different pitch from the two list-final pitches shown here for 'tru 'six': fall in pitch; consequently, it overlaps the pitch shown for the sS alternative of the tone-1 word 'cu 'ten' above (iii).

Burton-Page’s grave accent can be interpreted, in the light of this table, as a distribution symbol whereby a lexical item marked in this way can be said...
to occur, firstly, in a tone-2 monosyllabic word, secondly, in either the first or the second place of a tone-2 disyllabic word, and, thirdly, in the second place of a tone-1 disyllabic word; absence of accent, on the other hand, can be understood to mean that the lexical item distinguished by this absence of symbol can occur, firstly, in tone-1 monosyllabic words, secondly, in either place in tone-1 disyllabic words, and, thirdly, in the second place of tone-2 disyllabic words (cf. also Sprigg, 1981, 58).

III. A tonal analysis of Tamang for comparison: two two-term systems, register and contour

The model for my tonal analysis of Gurung is a recent analysis of a closely related language, Tamang (Sprigg 1990). I introduced that Tamang analysis by comparing it with an earlier analysis of the same dialect, spoken in Rishingo (or Risiangku), east-central Nepal, by Mazaudon, in which she distinguished four tones, numbered from 1 to 4; e.g.

\[
\begin{align*}
\text{mourir} & \quad \text{khru} & \quad \text{so} & \quad \text{tup} \\
\text{died} & \quad \text{washed} & \quad \text{prepared} & \quad \text{sewed}
\end{align*}
\]


My analysis had, in one of its earlier stages, corresponded exactly to this analysis of Mazaudon’s; e.g. (my examples, fig. 3, are disyllabic words comprising a verb and the past-tense suffix -ji)

\[
\begin{align*}
\text{shi-ji} & \quad \text{khru-ji} & \quad \text{so-ji} & \quad \text{drup-ji} \\
\text{died} & \quad \text{washed} & \quad \text{prepared} & \quad \text{sewed}
\end{align*}
\]

FIG. 3

(the second of the alternative pitch patterns is appropriate to continuative clause intonation) (Sprigg, 1990, 36); but, later in that article, I discarded that analysis in favour of an analysis that separates the register pitch features and the contour pitch features. This later analysis recognizes a two-term tone system, comprising tones 1 and 2, for the register distinctive pitches, and another two-term tone system, comprising tones A and B, for the contour distinctive pitches. The phonetic exponent of tone 1 is high pitch at the beginning of the word, while low pitch at the beginning of the word is a phonetic exponent of tone 2. A phonetic exponent of tone A is falling pitch for the first syllable of the word (with a low rise in pitch before the fall for tone-A words that are also tone-2), and a level pitch for the first syllable of the word for tone B (fig. 4).

\[
\begin{align*}
\text{register tone:} & \quad \text{contour tone:} \\
1 & \quad A \\
2 & \quad B \\
\text{examples:} & \quad \text{shi-ji} & \quad \text{khru-ji} & \quad \text{so-ji} & \quad \text{drup-ji}
\end{align*}
\]

FIG. 4

IV. Gurung tonal analysis: two two-term systems, register and contour

A. Register difference and contour difference

Burton-Page had described the Gurung of Ghandrung, as spoken by G/Lieut. Ganesh Gurung, M.C., as having a single tone system comprising two terms (II); but to the speech of Manshiri Gurungni, of Thak (or Thonsu), towards the centre of the Gurung-speaking area, I found that I could apply the same tonal analysis as for Tamang at (III) above: two tone systems, each comprising
two terms, register tones 1 and 2 and contour tones A and B; but the phonetic exponents of the Gurung tones A and B are by no means the same as those of the corresponding Tamang tones (fig. 5).

<table>
<thead>
<tr>
<th>Register Tone</th>
<th>Contour Tone</th>
</tr>
</thead>
<tbody>
<tr>
<td>[1]</td>
<td>[A]</td>
</tr>
<tr>
<td>[{1}1]</td>
<td>[A]</td>
</tr>
<tr>
<td>[{2}1]</td>
<td>[A]</td>
</tr>
<tr>
<td>[{2}2]</td>
<td>[A]</td>
</tr>
</tbody>
</table>

Examples:

- i. shi-la
- ii. see-la
- iii. pi-la
- iv. tsa-la

Glosses:

- i. had died
- ii. had killed
- iii. had given
- iv. had eaten

Like Burton-Page (II) I have taken the word to be the most suitable unit for stating tone in Gurung, not the syllable, the lexical item, or the morpheme. In tonal analyses based on the word unit it follows that individual lexical items such as shi(-), the first component of the verb-and-suffix word shi-la ‘had died’, at (i) in the left-hand column of figure 5, and see(-), pi(-), and tsa(-) at (ii), (iii), and (iv) in that column can be classified as tone-1-word lexical items, and also as tone-A-word lexical items, through their relationship with the tone-1-and-tone-A words shi-la, see-la, and other such examples of this tonal type of word; and corresponding classifications can be made for the three types of verb lexical item shown in the second, third, and fourth columns of that figure, as, respectively, tone-1-and-tone-B, tone-2-and-tone-A, and tone-2-and-tone-B lexical items.

Distinctive classifications such as those which have just been made for verb lexical items cannot be made for -la, the past-perfect suffix: this suffix lexical item occurs in words of all four tone combinations, 1-and-A, 1-and-B, 2-and-A, and 2-and-B; so giving it the tone classification tone-l/2-and-A/B, though legitimate, would be of little use; but the variety of pitches appropriate to -la, at least four in number, can be classified according to the tones of the word in which they occur:

<table>
<thead>
<tr>
<th>Word Tone</th>
<th>Register Tone</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-and-A</td>
<td>1-and-B</td>
</tr>
<tr>
<td>2-and-A</td>
<td>2-and-B</td>
</tr>
<tr>
<td>Pitch</td>
<td>Low</td>
</tr>
<tr>
<td>Level/Falling</td>
<td>Low/High</td>
</tr>
<tr>
<td>Level</td>
<td>Level</td>
</tr>
</tbody>
</table>

Unlike this suffix lexical item, -la, the verb lexical items that occupy the first-component place in the word in the examples in fig. 5 above are limited, for their share in the pitch features of the word as a whole, to whatever pitch or pitches are appropriate to the first-syllable place of a word of the appropriate register tone and contour tone:

<table>
<thead>
<tr>
<th>Word Tone</th>
<th>Register Tone</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-and-A</td>
<td>1-and-B</td>
</tr>
<tr>
<td>2-and-A</td>
<td>2-and-B</td>
</tr>
<tr>
<td>Pitch</td>
<td>Low</td>
</tr>
<tr>
<td>Level</td>
<td>Falling</td>
</tr>
<tr>
<td>Examples</td>
<td>Pri-</td>
</tr>
</tbody>
</table>

B. Pitch difference and phonation difference

Between the Burton-Page analysis, of 1955, and my own analysis, of 1995, there comes a rather different analysis, by W. W. Glover (1970), though it agrees with them in being based on a word unit, ‘the foot, or phonological word’. Glover’s analysis parallels my own division of tone into two tonal
systems; but, where my own analysis distinguishes register pitch differences from contour pitch differences, Glover’s analysis distinguishes ‘contrasts for pitch accent and contrasts for breathiness’ (p. 52). That is to say, Glover (1970) uses the term ‘tone’ to cover both a pitch-difference sub-system and a phonation-difference sub-system: pitch accent versus no pitch accent and breathiness versus no breathiness: ‘These distinctions lead to four types for monosyllabic words, six types for disyllabic words, and eight for trisyllabic words’ (Glover, 1970: 59); e.g. (limited to disyllabic feet comprising verb and suffix, so that they should be comparable with my examples shi-la, etc. in fig. 5).

<table>
<thead>
<tr>
<th>syllable:</th>
<th>1st</th>
<th>2nd</th>
<th>1st</th>
<th>2nd</th>
<th>1st</th>
<th>2nd</th>
<th>1st</th>
<th>2nd</th>
</tr>
</thead>
<tbody>
<tr>
<td>pitch:</td>
<td>mid</td>
<td>mid</td>
<td>high</td>
<td>mid</td>
<td>low</td>
<td>low</td>
<td>mid</td>
<td>low</td>
</tr>
<tr>
<td>phonation:</td>
<td>clear</td>
<td>—</td>
<td>clear</td>
<td>—</td>
<td>breathy</td>
<td>—</td>
<td>breathy</td>
<td>—</td>
</tr>
<tr>
<td>example:</td>
<td>/piba/</td>
<td>/syêba/</td>
<td>/cyêba/</td>
<td>/cyêba/</td>
<td>h</td>
<td>h, accent</td>
<td>to give</td>
<td>to know</td>
</tr>
<tr>
<td>gloss:</td>
<td>none</td>
<td>accent</td>
<td>h</td>
<td>h, accent</td>
<td>to give</td>
<td>to know</td>
<td>to bite</td>
<td>to remember</td>
</tr>
</tbody>
</table>

Fig. 6 (Glover, 1970: 64, 64, 72, 72).

The main difference between Glover’s analysis and my own as regards fig. 6 is that he has incorporated a phonation difference, clear versus breathy, into his tonal analysis; this phonation difference applies only to the first syllable (verb lexical item), except in words containing the negative prefix (Glover, 1970: 63–4). I, on the other hand, have concentrated on associating the pitch features of the first syllable (verb lexical item) with the pitch features of the second syllable (suffix lexical item) in a single pitch pattern for the word unit as a whole, leaving the phonation difference that can be seen in the examples in fig. 6, clear versus breathy, to be treated as a syllable feature: the initial syllable (verb lexical item) of tone-1 words is clear; the initial syllable of tone-2 words is ‘breathy’, the so-called ‘breathiness’ being due, possibly, to arytenoid glottal friction (but, against this, cf. Hinton, 1970, especially 78–80).

In a later work, Gurung–Nepali–English dictionary (Glover, Glover, and Gurung, 1977), representing primarily the dialect of Ghachok, in the West-Gurung dialect area, Glover and his co-authors seem to me to have given up ‘the foot or phonological word’ as the basis of his tone-and-phonation analysis in favour of the morpheme. This difference in analysis can be seen in the way that one of the dictionary entries has been treated, the following verbal-suffix entry: `-ba`, `-ba'`, `-baa`, `-baa'` s.v. —— gerund (-`baa` on voiced stop initial low clear verbs, `bobaa`; `-baa'` on other low clear verbs, `pibbaa`; `-ba'` on rising breathy verbs, `jxoba'`; `-ba` on high clear and low breathy verbs, `na'ba`, `kxoba'` (p. 8).

This lexical item `baa`/baa'/ba/has been given a double tonal classification, as both ‘intense’, in `-baa` and `-ba', and ‘relaxed’, in `-baa` and `-ba; this double classification suggests to me that Glover, Glover, and Gurung’s analysis cannot be ‘foot’-based but must be morpheme-based. By contrast the comparable suffix lexical item that I have used in my examples of word tone in fig. 5, `-la, I have left unclassified: it occurs in tone-L words and tone-2 words equally, and in tone-A words and tone-B words equally, thus rendering a distinctive tonal classification impossible.

C. Aspiration and tone 1, in Tamang and Gurung

In Sprigg (1990), I drew attention to the exclusive relationship of aspiration to (register) tone 1 in Tamang (pp. 42–3); the same relationship holds for (register) tone 1 in Gurung too, and is a strong argument in favour of separating a register tone system from a contour tone system; for aspiration has no
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relationship with either of the terms of the contour tone system, tone A and tone B; e.g.

i. tone 1, tone A: thee, khee, khaa
   hear, put on, fill

ii. tone B: khru, thu, khe
   wash, drink, tie (round), read


FIG. 7

D. Voice and tone 2, in Tamang and Gurung

In Sprigg (1990), I used the exclusive relationship of voice as a feature of Tamang syllable-initial and word-initial plosives and affricates to (register) tone 2 as an argument in favour of separating a register from a contour tone system: no such exclusive relationship applies to either of the Tamang contour tones A and B. I now wish to use a corresponding relationship between voice and (register) tone 2 in Gurung for the same purpose, with support from examples such as the following:

i. tone 2, tone A: bi, bla, boo
   say, untie, take

ii. tone B: dò, byò, dzò
   beat, throw, plant


FIG. 8

E. Comparison with Tibetan

Finally, I wish to recall that in Sprigg (1990), I was able to compare the Tamang register tone system, comprising tones 1 and 2, with tones 1 and 2 of the Tibetan tone system, in both the Reading Style of Tibetan pronunciation, used in reading and reciting written and printed books, and the spoken dialect of Lhasa (Sprigg, 1990: 40–8). The tonal system of these two forms of Tibetan is also based on a register distinction: so it should not be surprising that it corresponds well with the Gurung register system, tones 1 and 2. No such correspondence applies to the Gurung contour system, tones A and B; so this relationship and non-relationship of Gurung with Tibetan is a further, and Tibeto-Burman, argument in favour of separating register pitch from contour pitch distinctions in Gurung; e.g. (representing the Tibetan verb by its past root)

Fig. 9

F. Phonetic exponents of the tone systems, Tamang and Gurung

Since the two tone systems, the register system (1,2) and the contour system (A,B), are common to both Tamang and Gurung, one might expect the phonetic
exponents of the two terms in each of these two systems in the two languages to be equally similar; but, while they correspond well for the register system, they are almost completely the reverse of each other as regards the two terms of the contour system, A and B:

<table>
<thead>
<tr>
<th>register:</th>
<th>tone 1</th>
<th>tone 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>contour:</td>
<td>tone A</td>
<td>tone B</td>
</tr>
<tr>
<td>Tamang:</td>
<td>[]</td>
<td>[]</td>
</tr>
<tr>
<td>Gurung:</td>
<td>[]</td>
<td>[]</td>
</tr>
<tr>
<td>Tamang:</td>
<td>shi-ji</td>
<td>khru-ji</td>
</tr>
<tr>
<td>Gurung:</td>
<td>shi-la</td>
<td>khru-la</td>
</tr>
</tbody>
</table>

**Fig. 10**

Glosses
T.: died, washed, wrote, threw away
G.: had died, had washed, had written, had thrown.

This rather unexpected reversal in phonetic exponency is paralleled in the correspondences that Mazaudon has given for Tamang and Gurung monosyllables (1978, 165), using Chao Yuen-ren’s ‘tone letters’:

| tone 1 (my tone 1 and tone A): | 54 | 33 |
| tone 2 (my tone 1 and tone B): | 44 | 54 |
| tone 3 (my tone 2 and tone A): | 33/22 | 11 |
| tone 4 (my tone 2 and tone B): | 211 | 12 |

**Fig. 11**

(cf. also Sprigg, 1990: 51). The higher pitches, in Tamang, of Mazaudon’s tones 1 and 3 (54, 33/22), my tone A, correspond to the lower pitches (33, 11) of Gurung; and the lower pitches, in Tamang, of her tones 2 and 4 (44, 211), my tone B, correspond to the higher pitches (54, 12) of Gurung.

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